

Appendix J

Record Drawings

RECORD DRAWINGS
REMEDIAL ACTION
FOR REACHES 5E AND 6
KRESS CREEK/WEST BRANCH
DuPAGE RIVER SITE

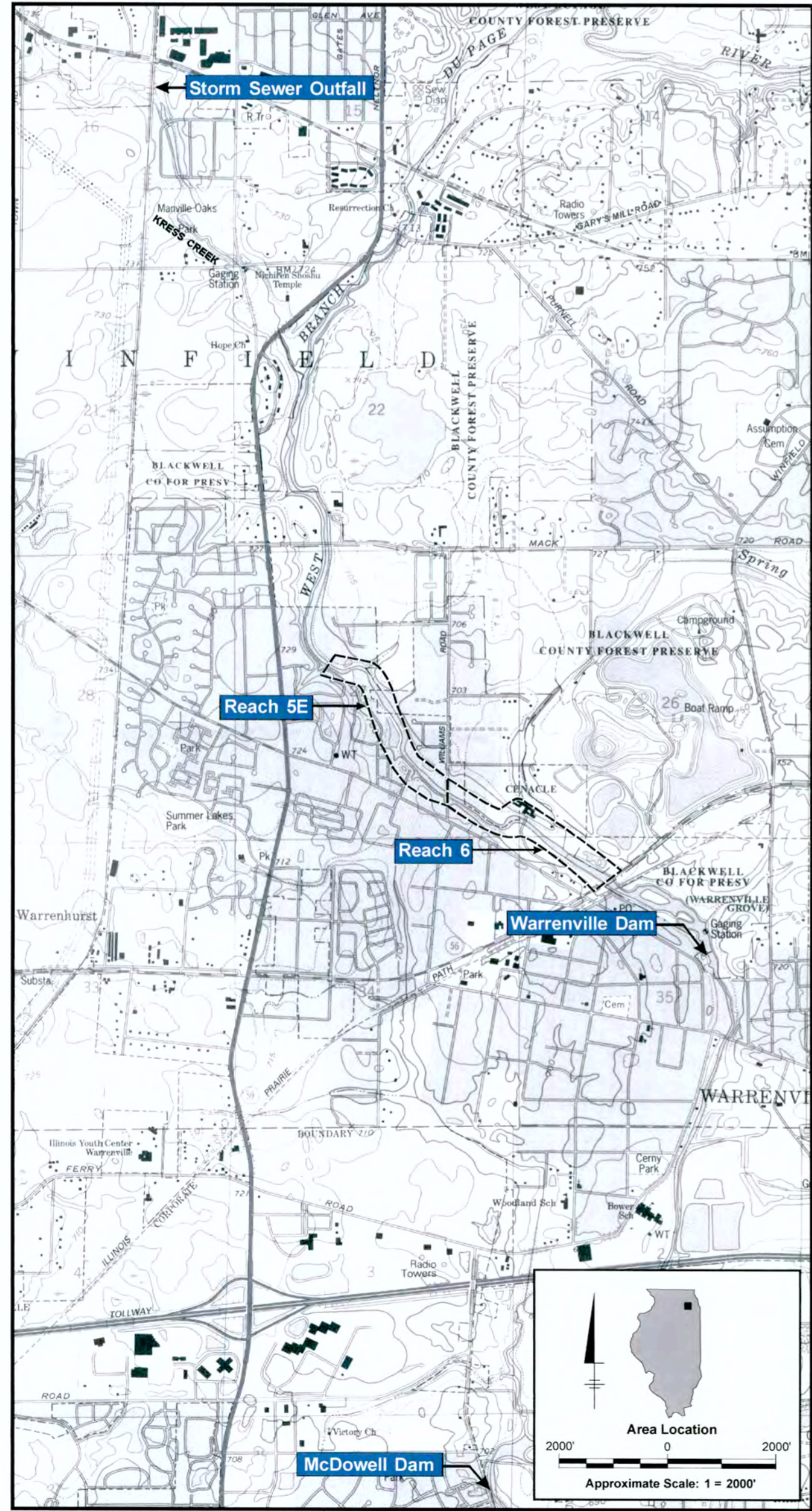
DuPAGE COUNTY, IL

RELEASED: OCTOBER 2009
REVISED: JUNE 2010

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE,
INFORMATION AND BELIEF, THESE RECORD
DRAWINGS SUBSTANTIALLY REPRESENT
THE PROJECT AS CONSTRUCTED
DATE 6/14/10 BY *MOG*

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LOCATION MAP

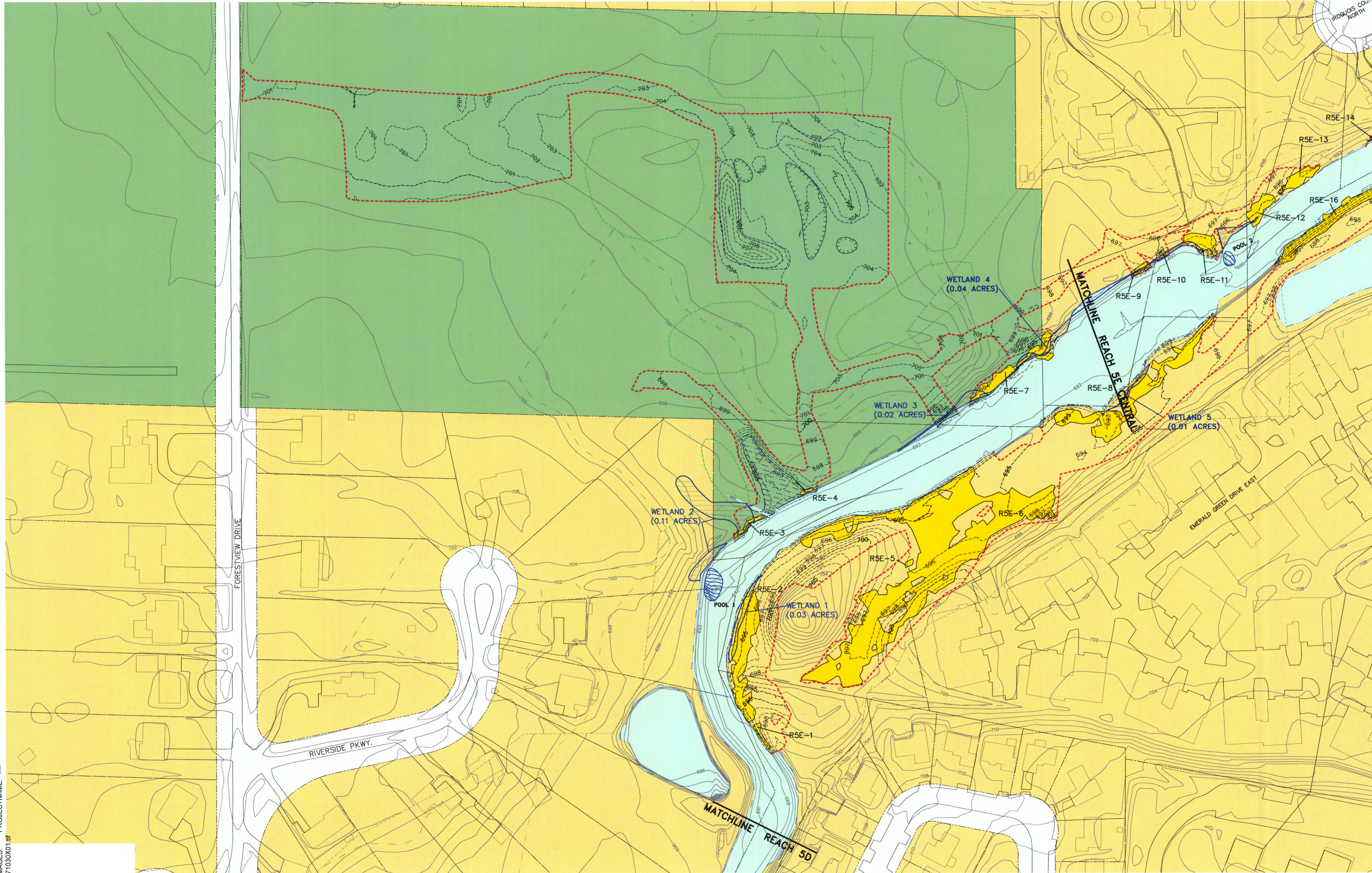
04/26/2010 SYRACUSE-ENV-141-DJHOWES
B0071030/0000/00048/CDR/71030C01.CDR
PDF VERSION PLOT AT 63%="D" SIZE

TRONOX LLC



















ARCADIS U.S., INC.



| 1 | XREFS: | IMAGES: | PROJECTNAME: |
|---|------------|------------|--------------|
| | 7100000000 | 7100000000 | XXXX |



- LEGEND:**

 -  LIMIT OF ACTUAL DISTURBANCE
 -  REMOVAL AREA
 -  WETLAND BOUNDARY
 -  WET MEADOW WETLAND
 -  MITIGATION WETLAND
 -  APPROXIMATE FLOODWAY
 -  APPROXIMATE FLOODPLAIN
 -  PROPERTY LINE
 -  ARCHEOLOGICAL SITE
 -  LIMIT OF SURVEY
 -  PRE-CONSTRUCTION CONTOUR
 -  POST-CONSTRUCTION CONTOUR MINOR
 -  POST-CONSTRUCTION CONTOUR MAJOR
 -  HOLLOW
 -  HUMMOCK
 -  POOL

LAND USE KEY

 -  FOREST PRESERVE
 -  RESIDENTIAL

NOTES:

1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF DISTURBANCE WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING COMPLETION OF RESTORATION.
2. EDGE OF WATER WITHIN THE LIMIT OF DISTURBANCE GENERATED FROM TOP AND TOE OF BANK INFORMATION COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION. EDGE OF WATER OUTSIDE THE LIMIT OF DISTURBANCE PROVIDED BY TRONOX IN AN ARC VIEW BASE MAP ENTITLED WEST CHICAGO KRESS CREEK.

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE,
INFORMATION AND BELIEF, THESE RECORD
DRAWINGS SUBSTANTIALLY REPRESENT THE
PROJECT AS CONSTRUCTED.

DATE 9-30-09 BY MOG

| | |
|--|--|
| | B0071030.0000.00036 |
| | Date OCTOBER 2009 |
| | ARCADIS 6723 Towpath Road PO BOX 66 Syracuse, NY 13214-0066 |

B-1A

(RECORD DRAWING: MADE FROM DRAWING NO. B-1A, TRACER NO. 71004060/REACH5E-6/71004G02.DWG, DATED 10/22/07)

DATE 9-30-09 BY MOG

ORIGINAL SCALE APPLIES TO 22"X34" DRAWING



THIS BAR
REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:



USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

| | | | | | | |
|---|---------|----------------|--|--------------|------------------------|---|
| | | | | | | Professional Engineer's Name MARK OWEN GRAVELDING |
| | | | | | | Professional Engineer's No. 062059378 |
| <u>A</u> | 9/30/09 | RECORD DRAWING | | MOG | Date Signed 9-30-09 | |
| No. | Date | Revisions | | Init | | |
| <small>THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF THAT ENTITY.</small> | | | | | | |
| | | | | Project Mgr. | Designed by ANF | Drawn by NES |

| | |
|------------------------------|-----------------------------|
| Professional Engineer's Name | MARK OWEN GRAVELDING |
| Professional Engineer's No. | 062059378 |

| | | |
|---------------------|------------------------|-----------------|
| State ILLINOIS | Date Signed 9-30-09 | |
| Project Mgr. MOG | Designed by ANE | Drawn by NES |



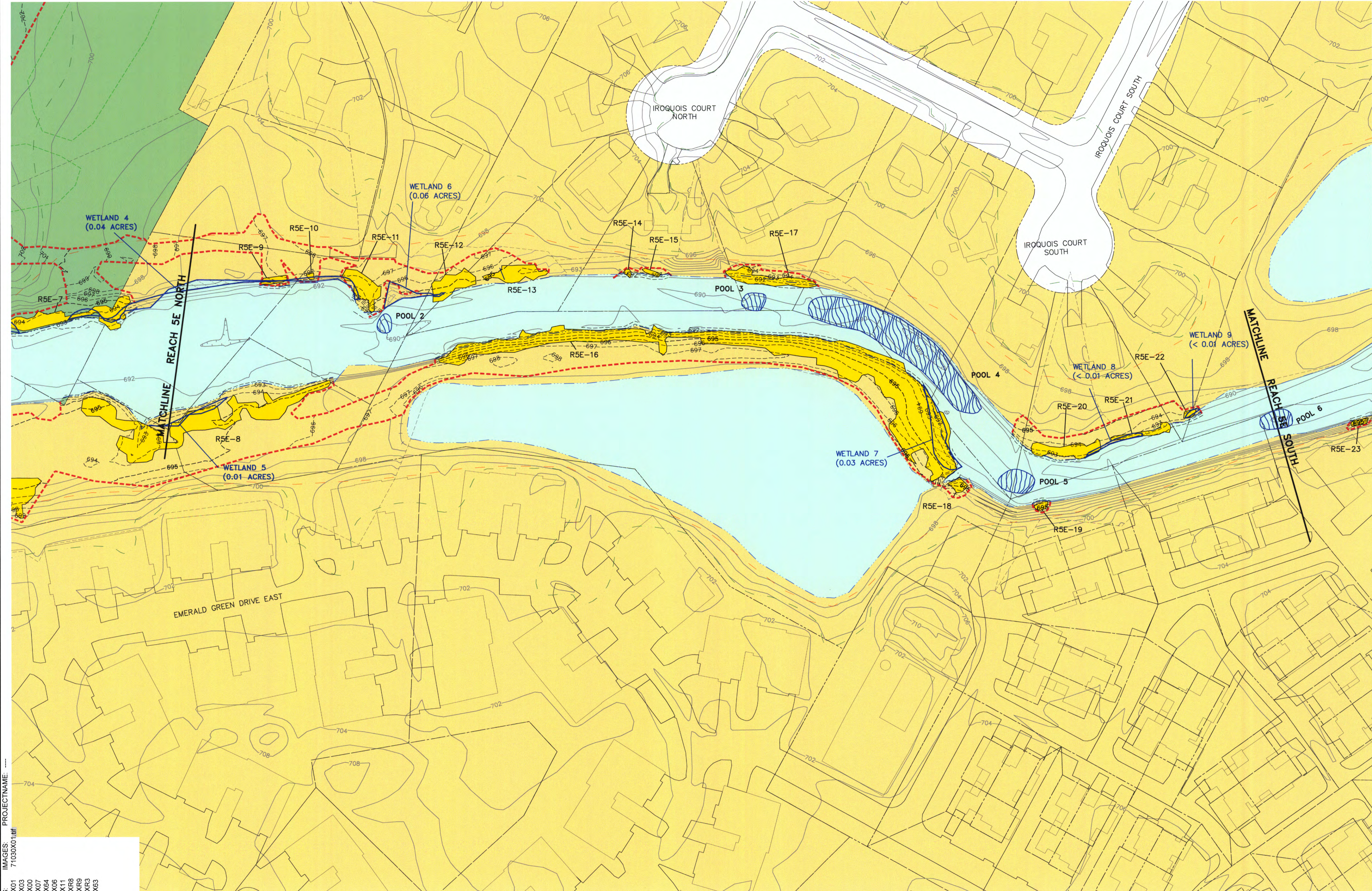
ARCADIS U.S., INC.

TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING — REACHES 5E AND 6

SITE PLAN WITH WETLAND BOUNDARIES - REACH 5E NORTH

| | |
|--|--|
| | B0071030.0000.00036 |
| | Date OCTOBER 2009 |
| | ARCADIS 6723 Towpath Road PO BOX 66 Syracuse, NY 13214-0066 |

CITY: SYRACUSE DIV/GRP: 141 DBNES LD/NES PIC: S COX PM: H. VANDEWALKER TM: E. RAZAWICH LVR: ON= OFF= REF= WETLAND-FW= WETLAND-W= PNT= G:\ENVCAD\SYRACUSE\ACT\B0071030\0000000026\DWG\71030G02.DWG LAYOUT: B-1B SAVED: 9/30/2009 2:47 PM ACADVER: 17.05 (LMS TECH) PAGES: 17 OF 17 PLOT: 9/30/2009 2:49 PM BY: SMITHGALL, NANCY



- LEGEND:**
- LIMIT OF ACTUAL DISTURBANCE
 - REMOVAL AREA
 - WETLAND BOUNDARY
 - WET MEADOW WETLAND
 - APPROXIMATE FLOODWAY
 - APPROXIMATE FLOODPLAIN
 - PROPERTY LINE
 - ARCHEOLOGICAL SITE
 - LIMIT OF SURVEY
 - PRE-CONSTRUCTION CONTOUR
 - POST-CONSTRUCTION CONTOUR MINOR
 - POST-CONSTRUCTION CONTOUR MAJOR
 - POOL

- LAND USE KEY**
- FOREST PRESERVE
 - RESIDENTIAL

- NOTES:**
1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF DISTURBANCE WERE DEVELOPED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION.
 2. EDGE OF WATER WITHIN THE LIMIT OF DISTURBANCE GENERATED FROM TOP AND TOE OF BANK INFORMATION COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION. EDGE OF WATER OUTSIDE THE LIMIT OF DISTURBANCE PROVIDED BY TRONOX IN AN ARC VIEW BASE MAP ENTITLED WEST CHICAGO KRESS CREEK.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

DATE 9-30-09 BY MUG

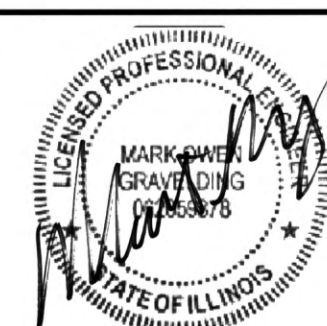
ORIGINAL SCALE APPLIES TO 22"X34" DRAWING

1"=60'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.

| No. | Date | RECORD DRAWING | Revisions | MOG |
|---|---------|----------------|-----------|------|
| 1 | 9/30/09 | RECORD DRAWING | | Init |
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Professional Engineer's Name
MARK OWEN GRAVELDING
Professional Engineer's No.
062059378
State
ILLINOIS
Date Signed
9-30-09
Project Mgr.
MOG
Designed by
ANE
Drawn by
NES



ARCADIS U.S., INC.

TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING - REACHES 5E AND 6

SITE PLAN WITH WETLAND BOUNDARIES - REACH 5E CENTRAL

80071030.0000.00036
Date
OCTOBER 2009
ARCADIS
6723 Towpath Road
P.O. BOX 66
Syracuse, NY 13214-0066

B-1B

CITY: SYRACUSE DIV/GRP: 141 DB: NES LD: NES PIC: S COX PM: H VANDEWALKER TM: E RAZAWICH LTR: ONE- OFF-REF: WETLAND-F-W- WETLAND-FW- WETLAND-W- PNT- G:\ENVCAD\STRACUSE\ACT100710300000000028\DWG\71030G02.DWG LAYOUT: B-1D SAVED: 9/30/2009 2:47 PM ACADVER: 17.05 (LMS TECH) PAGESETUP: C:\DWT\4713 HP DESIGNJET T1100 D4 PLOTSTYLETABLE: PLT\Full.ctb PLOTTED: 9/30/2009 2:48 PM BY: SMITHGALL, NANCY

PROJECT NAME: 71030X01.dwg
XREFS: 71004X01 71004X03 71004X00 71004X07 71030X06 71030X08 71030X09 71030X0R3 71030X063

ORIGINAL SCALE APPLIES TO 22"x34" DRAWING

1"=60'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.

USE TO VERIFY FIGURE REPRODUCTION SCALE

| | | | |
|---|------|----------------|------|
| 9/30/09 | | RECORD DRAWING | MOG |
| No. | Date | Revisions | Init |
| THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. | | | |

Professional Engineer's Name
MARK OWEN GRAVELDING

Professional Engineer's No.
062059378

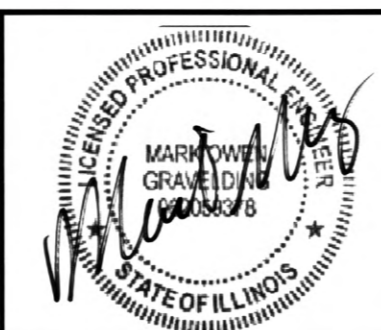
State
ILLINOIS

Date Signed
9-30-09

Project Mgr.
MOG

Designed by
ANE

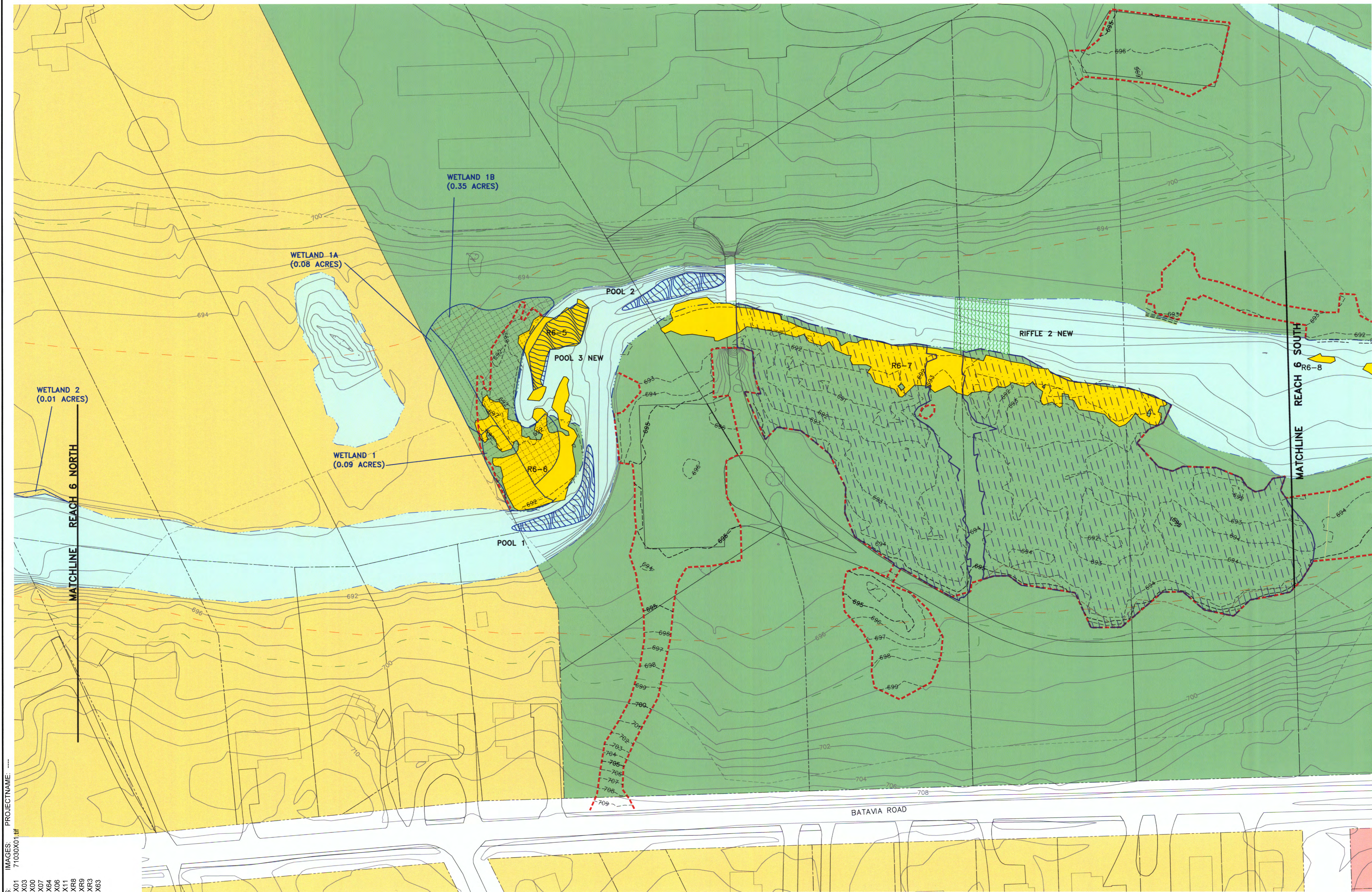
Drawn by
NES



TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING - REACHES 5E AND 6

**SITE PLAN WITH WETLAND BOUNDARIES -
REACH 6 CENTRAL**

| | |
|--|-------------|
| B0071030.0000.00036 | B-1D |
| Date OCTOBER 2009 | |
| ARCADIS 6723 Towpath Road PO BOX 66 Syracuse, NY 13214-0066 | |



LEGEND:

- LIMIT OF ACTUAL DISTURBANCE
- REMOVAL AREA
- WETLAND BOUNDARY
- WET MEADOW WETLAND
- FORESTED WETLAND
- MIXED WET MEADOW AND FORESTED WETLAND
- MITIGATION WETLAND
- APPROXIMATE FLOODWAY
- APPROXIMATE FLOODPLAIN
- PROPERTY LINE
- LIMIT OF SURVEY
- PRE-CONSTRUCTION CONTOUR
- POST-CONSTRUCTION CONTOUR MINOR
- POST-CONSTRUCTION CONTOUR MAJOR
- RIFFLE
- POOL

LAND USE KEY

- FOREST PRESERVE
- RESIDENTIAL
- GOVERNMENT

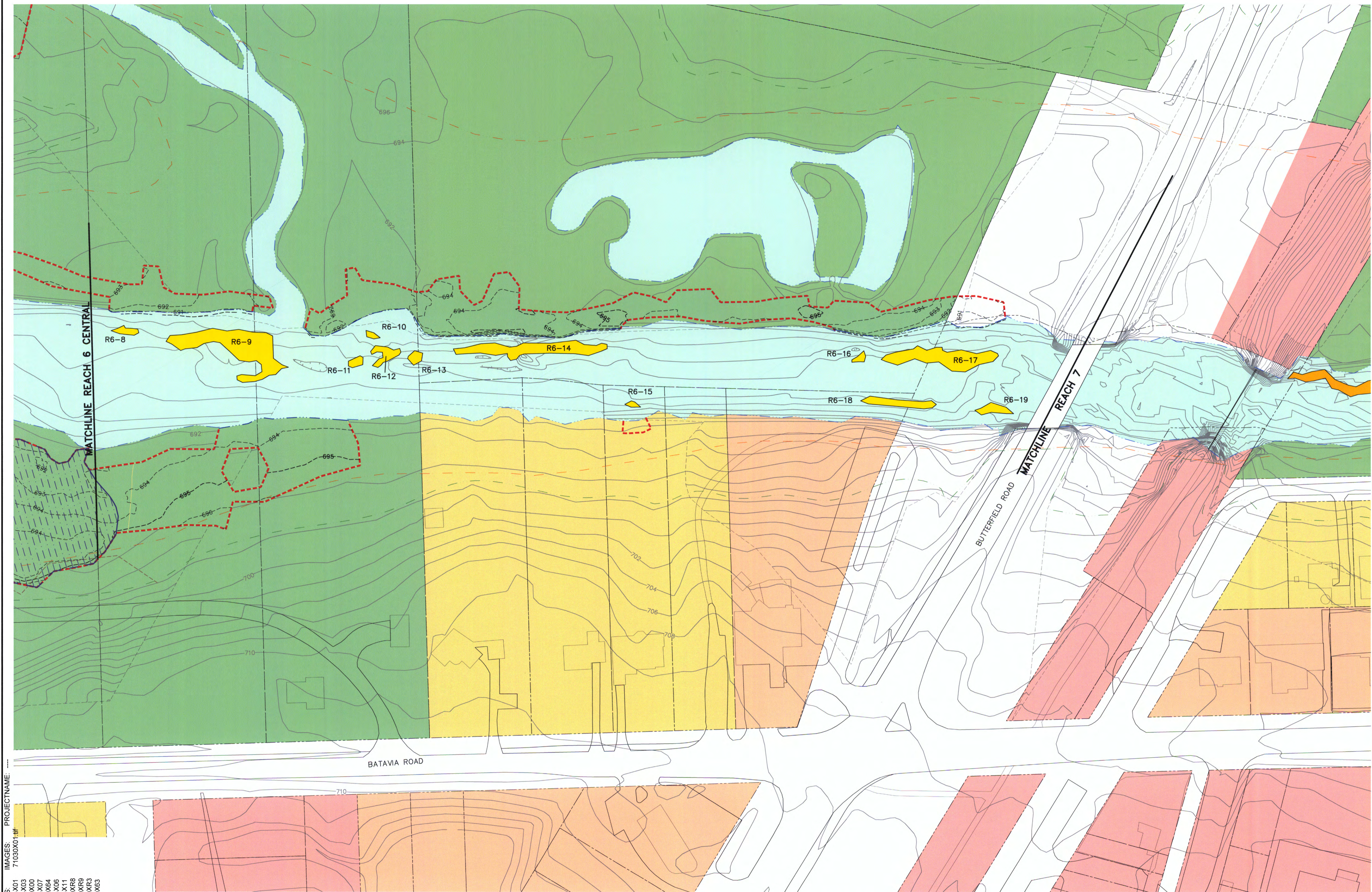
NOTES:

















1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF DISTURBANCE WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING COMPLETION OF RESTORATION.

2. EDGE OF WATER WITHIN THE LIMIT OF DISTURBANCE GENERATED FROM TOP AND TOE OF BANK INFORMATION COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION. EDGE OF WATER OUTSIDE THE LIMIT OF DISTURBANCE PROVIDED BY TRONOX IN AN ARC VIEW BASE MAP ENTITLED WEST CHICAGO KRESS CREEK.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

DATE: 9-30-09 BY: MOG



- ### LEGEND:
- | | |
|---|--|
|  | LIMIT OF ACTUAL DISTURBANCE |
|  | REMOVAL AREA |
|  | REMOVAL AREA TO BE ADDRESSED IN REACH 7 ACTIVITIES |
|  | MITIGATION WETLAND |
|  | APPROXIMATE FLOODWAY |
|  | APPROXIMATE FLOODPLAIN |
|  | PROPERTY LINE |
|  | LIMIT OF SURVEY |
|  | PRE-CONSTRUCTION CONTOUR |
|  | POST-CONSTRUCTION CONTOUR MINOR |
|  | POST-CONSTRUCTION CONTOUR MAJOR |
|  | POOLS |
- ### LAND USE KEY
- | | |
|---|-----------------|
|  | FOREST PRESERVE |
|  | RESIDENTIAL |
|  | COMMERCIAL |
|  | GOVERNMENT |

NOTES:

1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF DISTURBANCE WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING COMPLETION OF RESTORATION.
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RECORD DRAWINGS

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PROJECT AS CONSTRUCTED.

DATE 9-30-09 BY MOG

| |
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| B0071030.0000.00036 |
| Date OCTOBER 2009 |
| ARCADIS 6723 Towpath Road PO BOX 66 Syracuse, NY 13214-0066 |

B-1E

(RECORD DRAWING: MADE FROM DRAWING NO. B-1E, TRACER NO. 71004060/REACH5E-6/71004G02.DWG, DATED 10/22/07)

DATE 9-30-09 BY MOG

ORIGINAL SCALE APPLIES TO 22"X34" DRAWING



THIS BAR
REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:



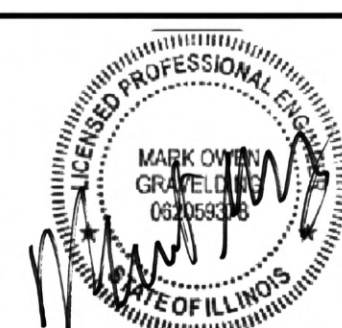
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| | | | | |
| A No. | 9/30/09 Date | RECORD DRAWING Revisions | | MOD Init |

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| | | |
|---|-------------------------------|------------------------|
| Professional Engineer's Name MARK OWEN GRAVELDING | | |
| Professional Engineer's No. 062059378 | | |
| State ILLINOIS | Date Signed 9-30-09 | |
| Project Mgr. MOC | Designed by ANE | Drawn by NES |



ARCADIS U.S., INC.

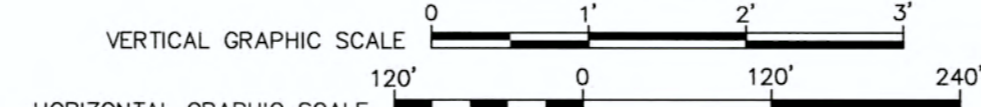
SITE PLAN WITH WETLAND BOUNDARIES - - REACH 6 SOUTH

TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING — REACHES 5E AND 6



DATE 9-30-09 BY M OG

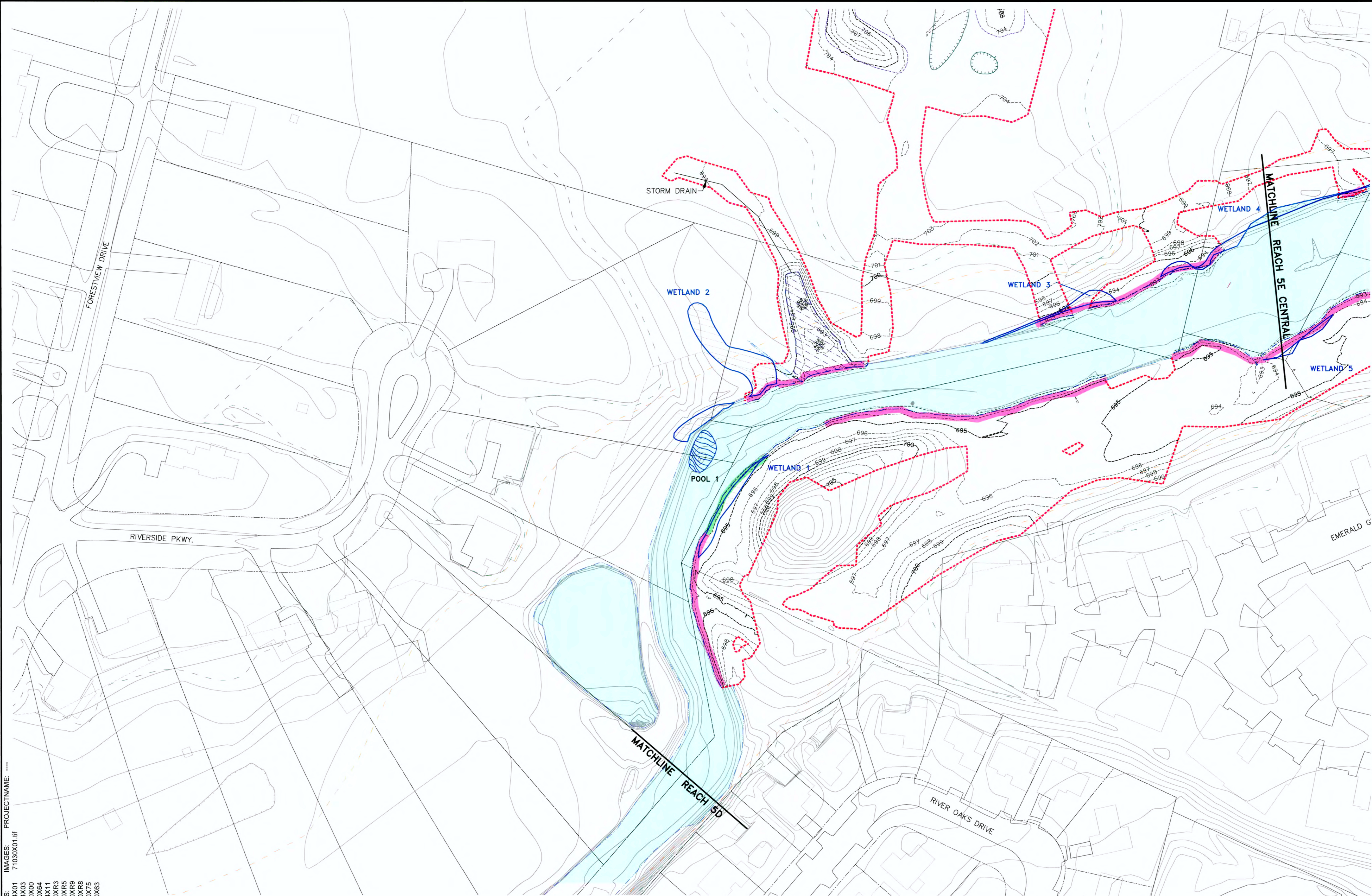
B-3



DATE 6/14/10 BY MOG

B-5

CITY: SYRACUSE DIV/GRP: 141 DB: NES LD: NES PIC: S.COX PM: H. VANDEWALKER TM: E. RAZAWICH LVR: ON* OFF: REF* PNT* TRANSECT* G:\ENVCAD\SYRACUSE\ACT\B0071030\00000000026\DWG\171030G04.DWG LAYOUT: B-11A SAVED: 6/11/2010 3:24 PM ACADVER: 17.05 (LMS TECH) PAGES: 17 OF 17 PLOT: 6/11/2010 3:24 PM BY: SMITHGALL, NANCY



- LEGEND:**
- LIMIT OF ACTUAL DISTURBANCE
 - - - APPROXIMATE FLOODWAY
 - - - APPROXIMATE FLOODPLAIN
 - PROPERTY LINE
 - WETLAND BOUNDARY
 - WET MEADOW WETLAND
 - FORESTED WETLAND
 - MITIGATION WETLAND
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION A ON DRAWING B-9
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION B ON DRAWING B-9
 - APPROXIMATE EDGE OF WATER
 - LIMIT OF SURVEY
 - PRE-CONSTRUCTION CONTOUR
 - POST-CONSTRUCTION CONTOUR MINOR
 - POST-CONSTRUCTION CONTOUR MAJOR
 - BOULDERS
 - POOL
 - HUMMOCK
 - HOLLOW
 - VERTICAL ROOT WAD

- NOTES:**
1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE AND THE LOCATIONS OF RESTORATION PLANTINGS AND STRUCTURES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING COMPLETION OF RESTORATION.
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 3. THE DuPAGE COUNTY FOREST PRESERVE HAS TAKEN EARLY MAINTENANCE RESPONSIBILITIES FOR THE REACH 5E MITIGATION WETLAND. NO FUTURE MONITORING OR MAINTENANCE ACTIVITIES NECESSARY.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

(RECORD DRAWING: MADE FROM DRAWING NO. B-11A, TRACER NO. 71004060/REACH5E/71004G04.DWG, DATED 10/22/07)

DATE 6/14/10 BY MOG

ORIGINAL SCALE APPLIES TO 22"x34" DRAWING

1"=60'

60' 0 60' 120'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.

USE TO VERIFY FIGURE REPRODUCTION SCALE

| | | | |
|---|---|-----------|------|
| | | | |
| 6/14/10 | REVISE BANK RESTORATION APPLICATIONS AND LEGEND AND ADD NOTE 3 TO DRAWING | MOG | |
| 9/30/09 | LABEL POOLS & RIFFLES, LEGEND REVISIONS | MOG | |
| 11/19/08 | RECORD DRAWING | MOG | |
| No. | Date | Revisions | Init |
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Professional Engineer's Name
MARK OWEN GRAVELDING

Professional Engineer's No.
062059378

State
ILLINOIS

Date Signed
6-14-10

Project Mgr.
MOG

Designed by
ANE

Drawn by
NES



ARCADIS

ARCADIS U.S., INC.

TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING - REACHES 5E AND 6

RESTORATION APPLICATIONS - REACH 5E NORTH

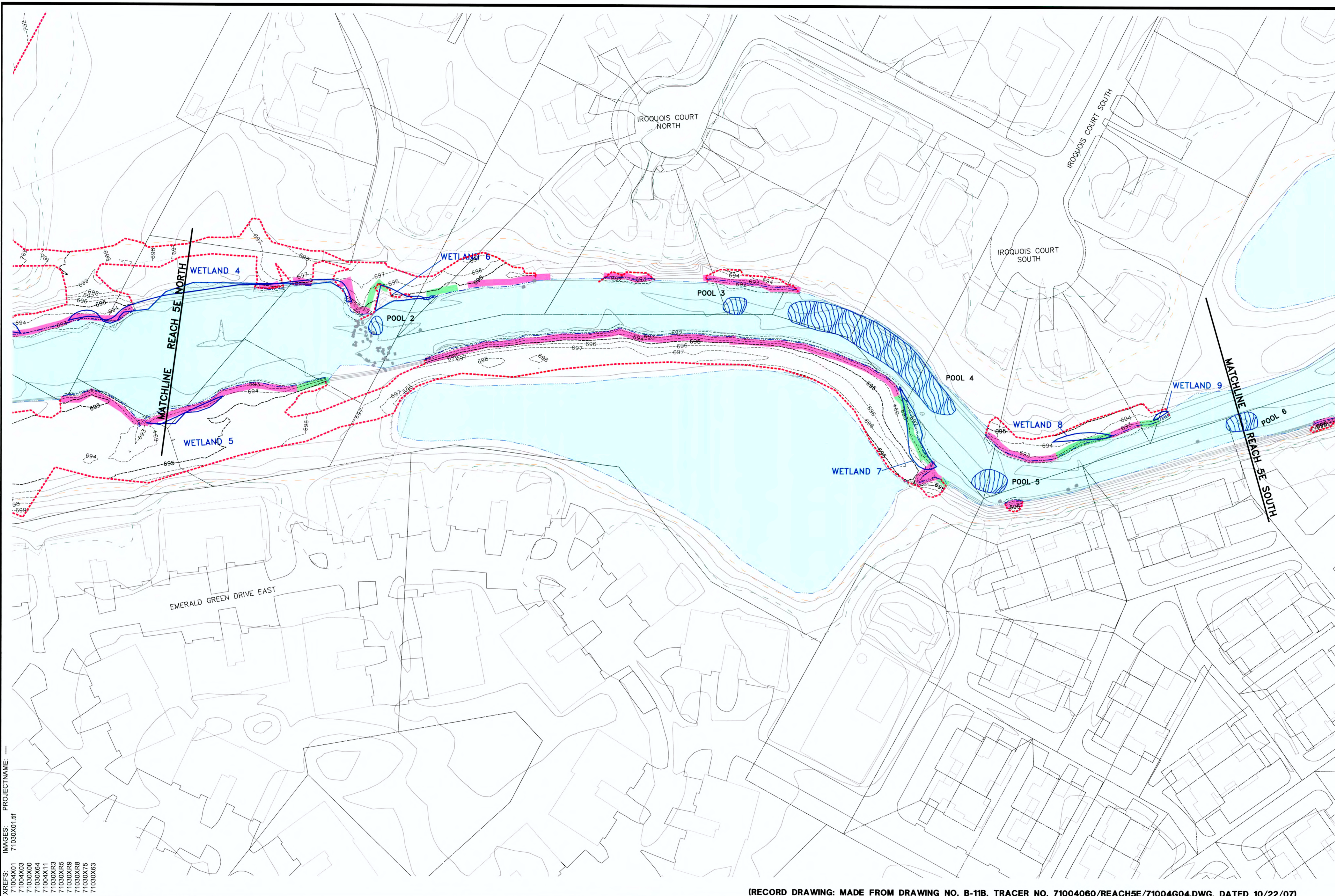
B0071030.0000.00036

Date
JUNE 2010

ARCADIS
6723 Towpath Road
PO BOX 66
Syracuse, NY 13214-0066

B-11A

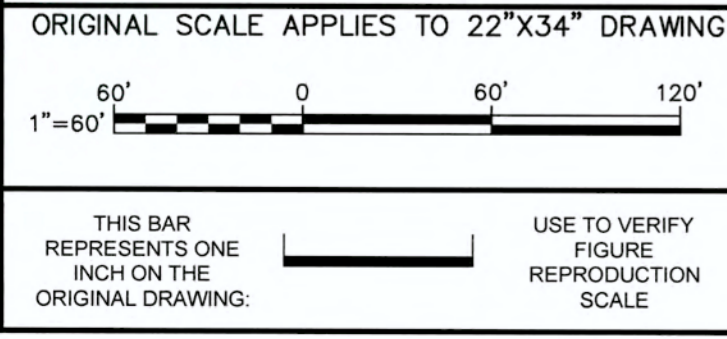
CITY: SYRACUSE DIV/GRP: 141 DBNES LD NES PIC S COX PM H VANDEWALKER TM E RAZAWICH LVR ON* OFF=REF* *PNT* *TRANSECT*
G:\ENVCAD\S\RACUSE\ACT\B0071030\0000000026\DWG\71030G04.DWG LAYOUT: B-11B SAVED: 6/11/2010 3:24 PM ACADVER: 17.05 (LMS TECH) PAGES: 17 OF 17 PLOT: 6/11/2010 3:26 PM BY: SMITHGALL, NANCY



- LEGEND:**
- LIMIT OF ACTUAL DISTURBANCE
 - APPROXIMATE FLOODWAY
 - APPROXIMATE FLOODPLAIN
 - PROPERTY LINE
 - WETLAND BOUNDARY
 - WET MEADOW WETLAND
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION A ON DRAWING B-9
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION B ON DRAWING B-9
 - APPROXIMATE EDGE OF WATER
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 - PRE-CONSTRUCTION CONTOUR
 - POST-CONSTRUCTION CONTOUR MINOR
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 - BOULDERS
 - POOL

- NOTES:**
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| | | |
|----------|--|-----------|
| No. | Date | Revisions |
| 6/14/10 | REVISED BANK AND IN-STREAM RESTORATION APPLICATIONS AND LEGEND | MOG |
| 9/30/09 | LABEL POOLS & RIFLES, LEGEND REVISIONS | MOG |
| 11/19/08 | RECORD DRAWING | MOG |

Professional Engineer's Name
MARK OWEN GRAVELDING

Professional Engineer's No.
062059378

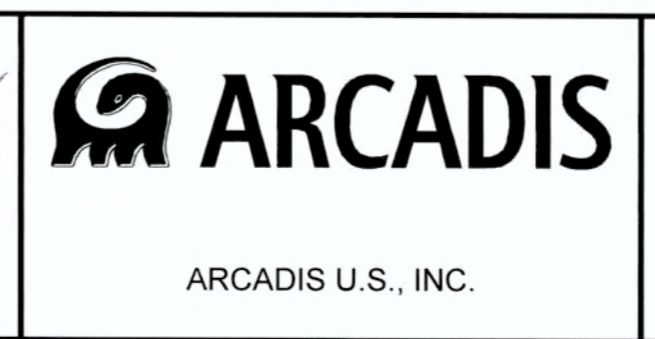
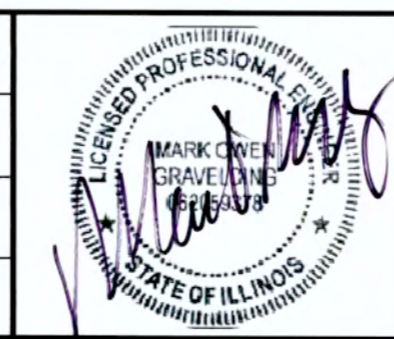
State
ILLINOIS

Date Signed
6-14-10

Project Mgr.
MOG

Designed by
ANE

Drawn by
NES



TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING - REACHES 5E AND 6

RESTORATION APPLICATIONS - REACH 5E CENTRAL

DATE **6/14/10** BY **MOG**

B0071030.0000.00036

Date
JUNE 2010

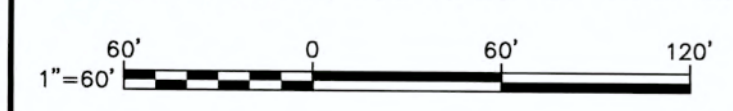
ARCADIS
6723 Towpath Road
PO BOX 66
Syracuse, NY 13214-0066

B-11B

CITY: SYRACUSE DIV/GRP: 141 DB: NES LD: NES PIC: S: COX PM: H: VANDEWALKER TM: E: RAZAVICH LVR: ONI* OFF: REF* PNT*: TRANSCT*
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ORIGINAL SCALE APPLIES TO 22"x34" DRAWING



THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.

USE TO VERIFY FIGURE REPRODUCTION SCALE

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| | | | | |
| △ | 6/14/10 | ADD BOULDERS AND PIPE IN MITIGATED WETLAND | | MOC |
| △ | 9/30/09 | LABELED POOLS AND RIFFLE, LEGEND REVISIONS | | MOC |
| △ | 8/18/09 | RECORD DRAWING | | MOC |
| No. | Date | Revisions | | Init |
| THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. | | | | |

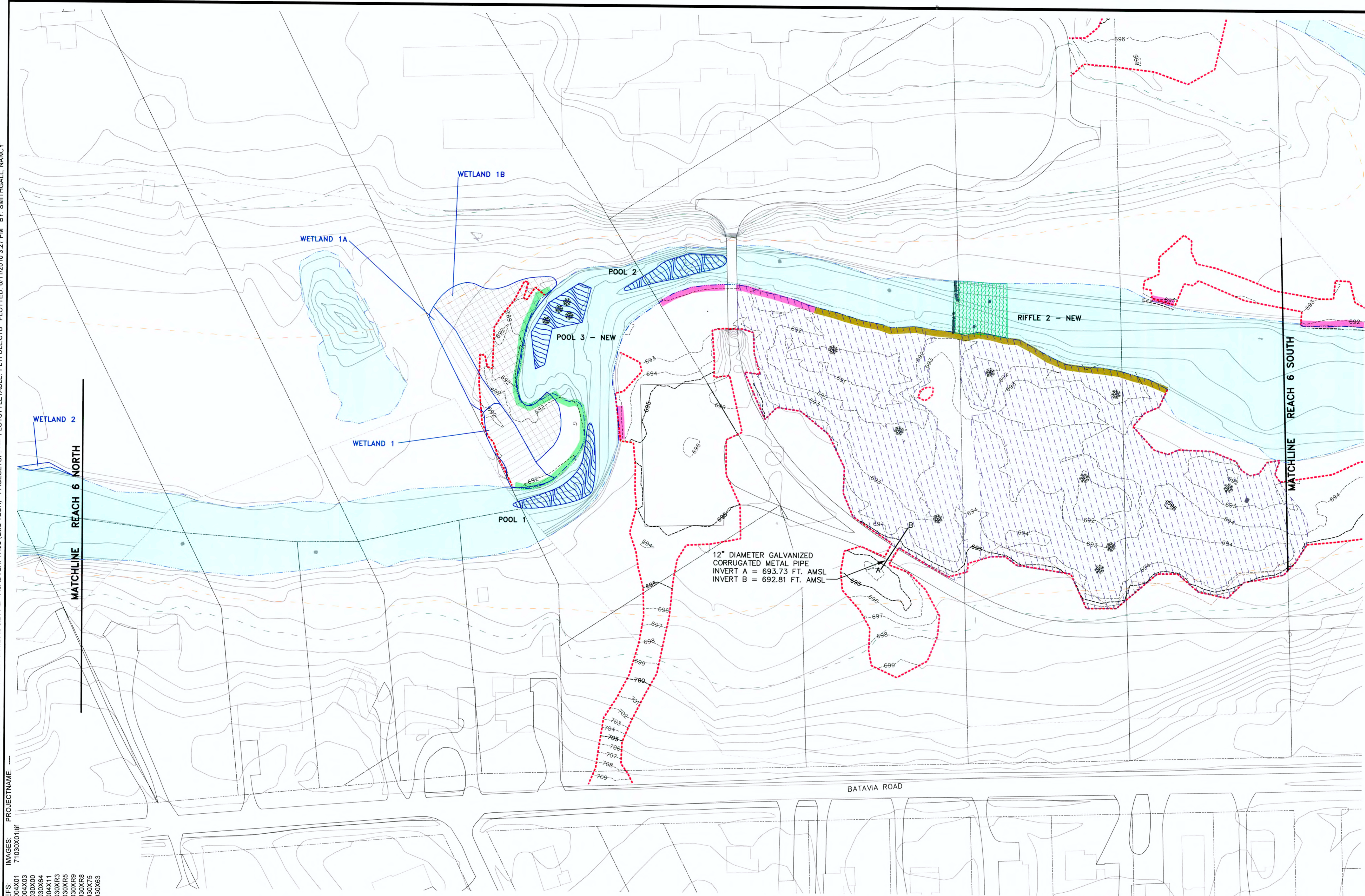
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|---|-------------------------------|
| Professional Engineer's Name MARK OWEN GRAVELDING | |
| Professional Engineer's No. 062059378 | |
| State ILLINOIS | Date Signed 6-14-10 |
| Project Mgr. MOG | Designed by ANE |
| | Drawn by NES |



TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING - REACHES 5E AND 6

RESTORATION APPLICATIONS -
REACH 6 CENTRAL

| | |
|---|--------------|
| DATE 6/14/10 BY MOG | |
| B0071030.0000.00036 | |
| Date JUNE 2010 | B-11D |
| ARCADIS 6723 Township Road PO BOX 66 Syracuse, NY 13214-0066 | |

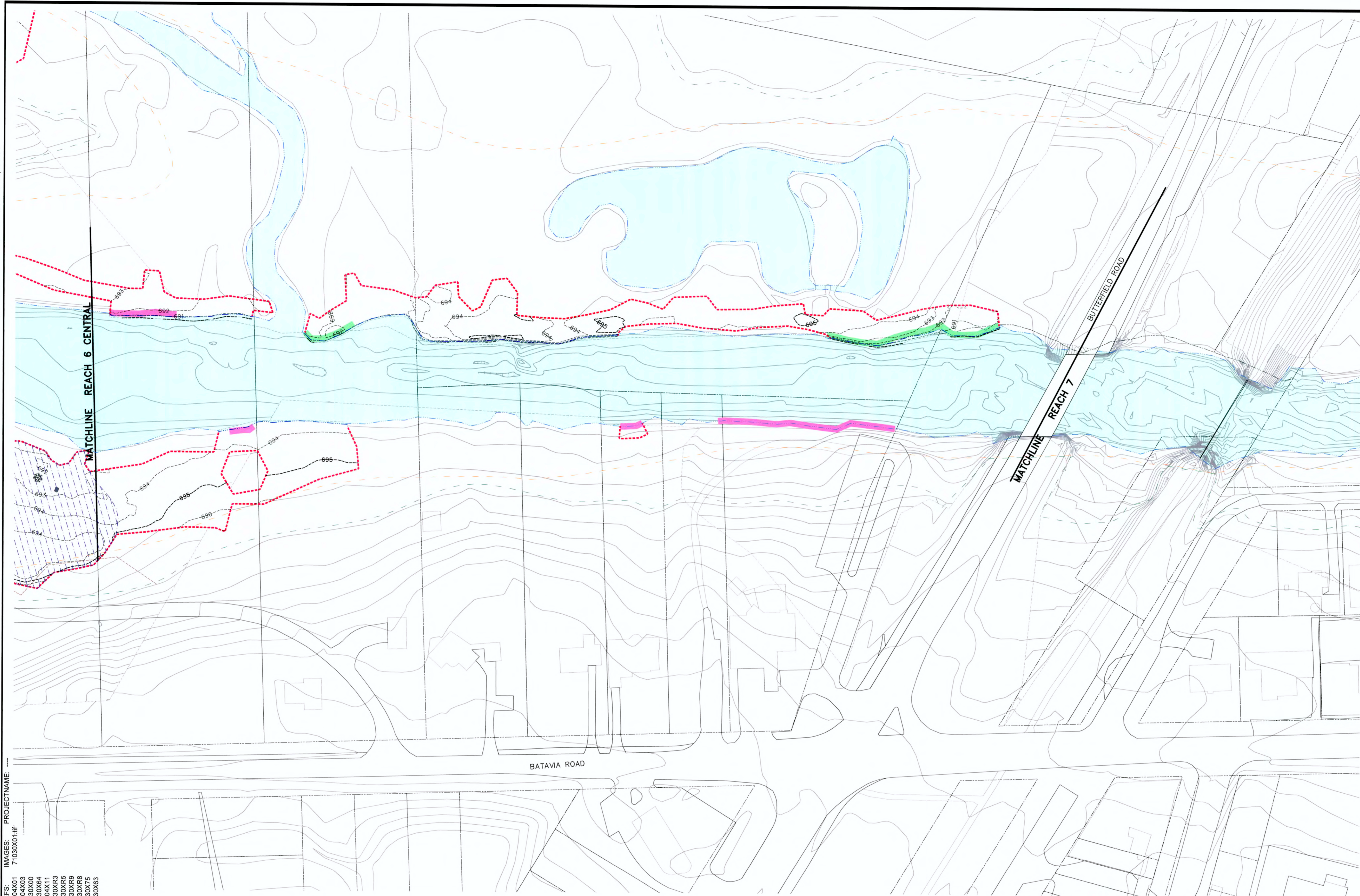


- LEGEND:**
- LIMIT OF ACTUAL DISTURBANCE
 - - - APPROXIMATE FLOODWAY
 - - - APPROXIMATE FLOODPLAIN
 - PROPERTY LINE
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION A ON DRAWING B-9
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION B ON DRAWING B-9
 - CRENULATED BANK PER TYPICAL CROSS SECTION D ON DRAWING B-10
 - WET MEADOW WETLAND
 - FORESTED WETLAND
 - MIXED WET MEADOW AND FORESTED WETLAND
 - MITIGATION WETLAND
 - APPROXIMATE EDGE OF WATER
 - LIMIT OF SURVEY
 - PRE-CONSTRUCTION CONTOUR
 - POST-CONSTRUCTION CONTOUR MINOR
 - POST-CONSTRUCTION CONTOUR MAJOR
 - BOULDERS
 - POOL
 - RIFFLE
 - VERTICAL ROOTWADS
 - NEW BOULDERS

- NOTES:**
1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE AND THE LOCATIONS OF RESTORATION PLANTINGS AND STRUCTURES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING COMPLETION OF RESTORATION.
 2. EDGE OF WATER WITHIN THE LIMIT OF DISTURBANCE GENERATED FROM TOP AND TOE OF BANK INFORMATION COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION. EDGE OF WATER OUTSIDE THE LIMIT OF DISTURBANCE PROVIDED BY TRONOX IN AN ARC VIEW BASE MAP ENTITLED WEST CHICAGO KRESS CREEK.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

CITY: SYRACUSE DIV/GRP: 141 DB: NES LD: NES PIC: S.COX PM: H. VANDEWALKER TM: E. RAZAWICH LVR: ON= OFF=REF= PNT= *TRANSECT*
G:\ENVCAD\SYRACUSE\PROJECTS\B0071030\0000000002\DWG\71030G04.DWG LAYOUT: B-11E SAVED: 6/11/2010 3:24 PM ACADVER: 17.05 (LMS TECH) PAGES: 17 OF 17 PLOT: 6/11/2010 3:28 PM BY: SMITHGALL, NANCY



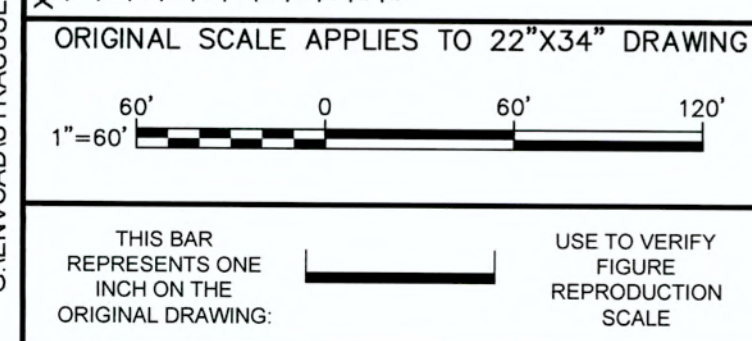
- LEGEND:**
- LIMIT OF ACTUAL DISTURBANCE
 - APPROXIMATE FLOODWAY
 - APPROXIMATE FLOODPLAIN
 - PROPERTY LINE
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION A ON DRAWING B-9
 - PORTION OF BANK RESTORED PER TYPICAL CROSS SECTION B ON DRAWING B-9
 - MITIGATION WETLAND
 - APPROXIMATE EDGE OF WATER
 - LIMIT OF SURVEY
 - PRE-CONSTRUCTION CONTOUR
 - POST-CONSTRUCTION CONTOUR MINOR
 - POST-CONSTRUCTION CONTOUR MAJOR
 - BOULDERS
 - POOL
 - VERTICAL ROOTWADS
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- NOTES:**
1. BASE MAP PROVIDED BY KERR-McGEE CHEMICAL LLC (NOW KNOWN AS TRONOX) IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE AND THE LOCATIONS OF RESTORATION PLANTINGS AND STRUCTURES WERE DEVELOPED BY ARCADIS FROM SURVEY DATA COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING COMPLETION OF RESTORATION.
 2. EDGE OF WATER WITHIN THE LIMIT OF DISTURBANCE GENERATED FROM TOP AND TOE OF BANK INFORMATION COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION. EDGE OF WATER OUTSIDE THE LIMIT OF DISTURBANCE PROVIDED BY TRONOX IN AN ARC VIEW BASE MAP ENTITLED WEST CHICAGO KRESS CREEK.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

(RECORD DRAWING: MADE FROM DRAWING NO. B-11E, TRACER NO. 71004060/REACH5E/71004G04.DWG, DATED 10/22/07)

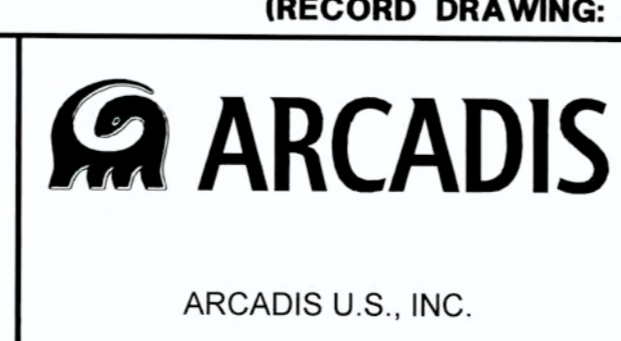
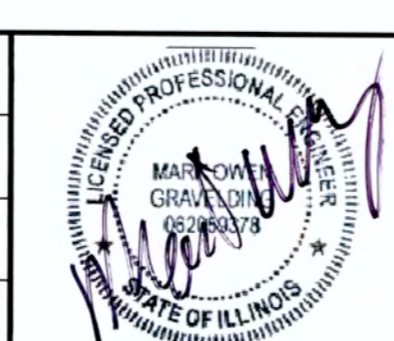
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| DATE 6/19/10 BY MOG | B0071030.0000.00036 |
| Date JUNE 2010 | |
| ARCADIS 6723 Tawpath Road PO BOX 66 Syracuse, NY 13214-0066 | B-11E |



| No. | Date | Revisions | MOG |
|---------|------|---|-----|
| 6/14/10 | | REVISE BANK RESTORATION APPLICATIONS AND LEGEND | MOG |
| 9/30/09 | | LEGEND REVISIONS | MOG |
| 8/19/09 | | RECORD DRAWING | MOG |

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

Professional Engineer's Name
MARK OWEN GRAVELDING
Professional Engineer's No.
062059378
State
ILLINOIS
Project Mgr.
MOG
Designed by
ANE
Drawn by
NES



TRONOX LLC • KRESS CREEK/WEST BRANCH DUPage RIVER SITE
RECORD DRAWING - REACHES 5E AND 6
**RESTORATION APPLICATIONS -
REACH 6 SOUTH**

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71030XR3
71030X70
71004X03
71030XR8
71030X63
71030XVB
71030XVC



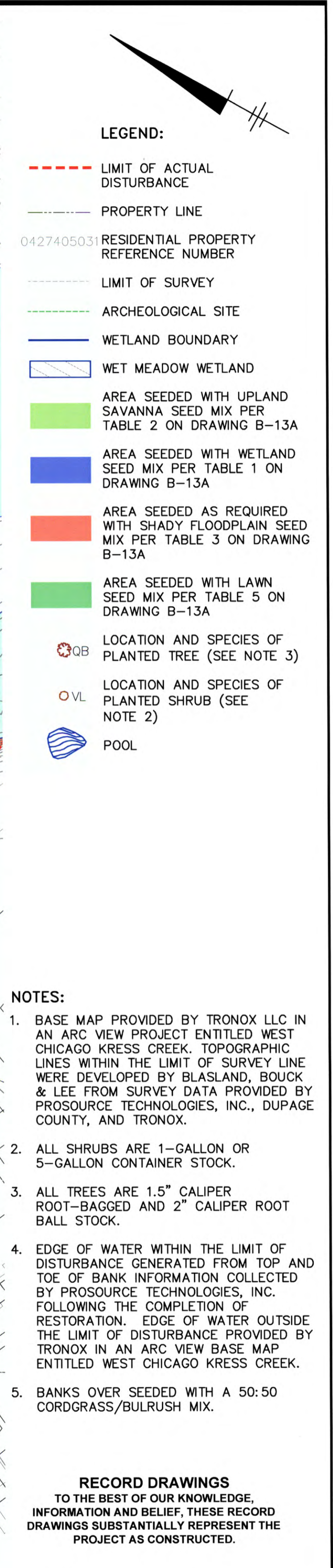
THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

ARCADIS U.S., INC.

VEGETATION RESTORATION PLAN - REACH 5E NORTH

| |
|--|
| B0071030.0000.00036 |
| Date JUNE 2010 |
| ARCADIS 6723 Towpath Road PO BOX 66 Syracuse, NY 13214-0066 |













B-12A



DATE 9-30-09 BY MOA

| | | | | | | | | | | | |
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| ORIGINAL SCALE APPLIES TO 22"x34" DRAWING | | | | Professional Engineer's Name MARK OWEN GRAVELDING | |  |  | TRONOX LLC • KRESS CREEK/WEST BRANCH DUPAGE RIVER SITE RECORD DRAWING – REACHES 5E AND 6 | | B0071030.0000.00036 | |
| 1"=60' 0 60' 120' | | | | Professional Engineer's No. 062059378 | | | | Date NOVEMBER 2008 | | | |
| THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING. | | USE TO VERIFY REPRODUCTION SCALE | | State ILLINOIS | | | | Date Signed 9-30-09 | | | |
| No. Date Revisions | | Mog | | Mog | | | | Mog | | | |
| 9/30/09 TREE AND LEGEND REVISIONS | | Mog | | Mog | | Mog | | | | | |
| 5/21/09 TREE AND SEEDING REVISIONS BASED ON WALKTHROUGH | | Mog | | Mog | | Mog | | | | | |
| 11/19/08 RECORD DRAWING | | Mog | | Mog | | Mog | | | | | |
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LEGEND:

-  LIMIT OF ACTUAL DISTURBANCE
-  PROPERTY LINE
- 0427411001 RESIDENTIAL PROPERTY REFERENCE NUMBER
-  LIMIT OF SURVEY
-  WETLAND BOUNDARY
-  FORESTED WETLAND
-  AREA SEEDDED WITH SHADY FLOODPLAIN SEED MIX PER TABLE 3 ON DRAWING B-13B
-  AREA SEEDDED WITH OPEN FLOODPLAIN SEED MIX PER TABLE 4 ON DRAWING B-13B
-  AREA SEEDDED WITH LAWN SEED MIX PER TABLE 5 ON DRAWING B-13B
-  QB LOCATION AND SPECIES OF PLANTED TREE (SEE NOTE 3)
-  OVL LOCATION AND SPECIES OF PLANTED SHRUB (SEE NOTE 2)
-  POOL
-  RIFFLE

- NOTES:**
1. BASE MAP PROVIDED BY TRONOX LLC IN AN ARC VIEW PROJECT ENTITLED WEST CHICAGO KRESS CREEK. TOPOGRAPHIC LINES WITHIN THE LIMIT OF SURVEY LINE WERE DEVELOPED BY BLASLAND, BOUCK & LEE FROM SURVEY DATA PROVIDED BY PROSOURCE TECHNOLOGIES, INC., DUPAGE COUNTY, AND TRONOX.
 2. ALL SHRUBS ARE 1-GALLON OR 5-GALLON CONTAINER STOCK.
 3. ALL TREES ARE 1.5" CALIPER ROOT-BAGGED AND 2" CALIPER ROOT BALL STOCK.
 4. EDGE OF WATER WITHIN THE LIMIT OF DISTURBANCE GENERATED FROM TOP AND TOE OF BANK INFORMATION COLLECTED BY PROSOURCE TECHNOLOGIES, INC. FOLLOWING THE COMPLETION OF RESTORATION. EDGE OF WATER OUTSIDE THE LIMIT OF DISTURBANCE PROVIDED BY TRONOX IN AN ARC VIEW BASE MAP ENTITLED WEST CHICAGO KRESS CREEK.
 5. BANKS OVER SEEDED WITH A 50:50 CORDGRASS/BULRUSH MIX.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE,
INFORMATION AND BELIEF, THESE RECORD
DRAWINGS SUBSTANTIALLY REPRESENT THE
PROJECT AS CONSTRUCTED.

(RECORD DRAWING: MADE FROM DRAWING NO. B-12C, TRACER NO. 71004060/REACH5E-6/71004G10.DWG, DATED 10/22/07)

DATE 9-30-09 BY MOG

ORIGINAL SCALE APPLIES TO 22"X34" DRAWING



THIS BAR
REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:



USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

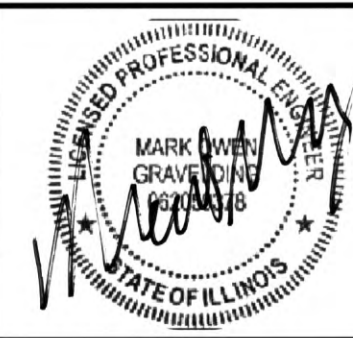
| | | |
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| 2 | 9/30/09 | LEGEND AND TREE/SHRUB UPDATES |
| 1 | 8/19/09 | RECORD DRAWING |

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

Professional Engineer's Name
MARK OWEN GRAVELDING

Professional Engineer's No.
062059378

| | | |
|---------------------|--------------------|------------------------|
| State ILLINOIS | | Date Signed 9-30-09 |
| Project Mgr. MOG | Designed by ANE | Drawn by NES |



ARCADIS U.S., INC.

TRONOX LLC • KRESS CREEK/WEST BRANCH DuPAGE RIVER SITE
RECORD DRAWING – REACHES 5E AND 6

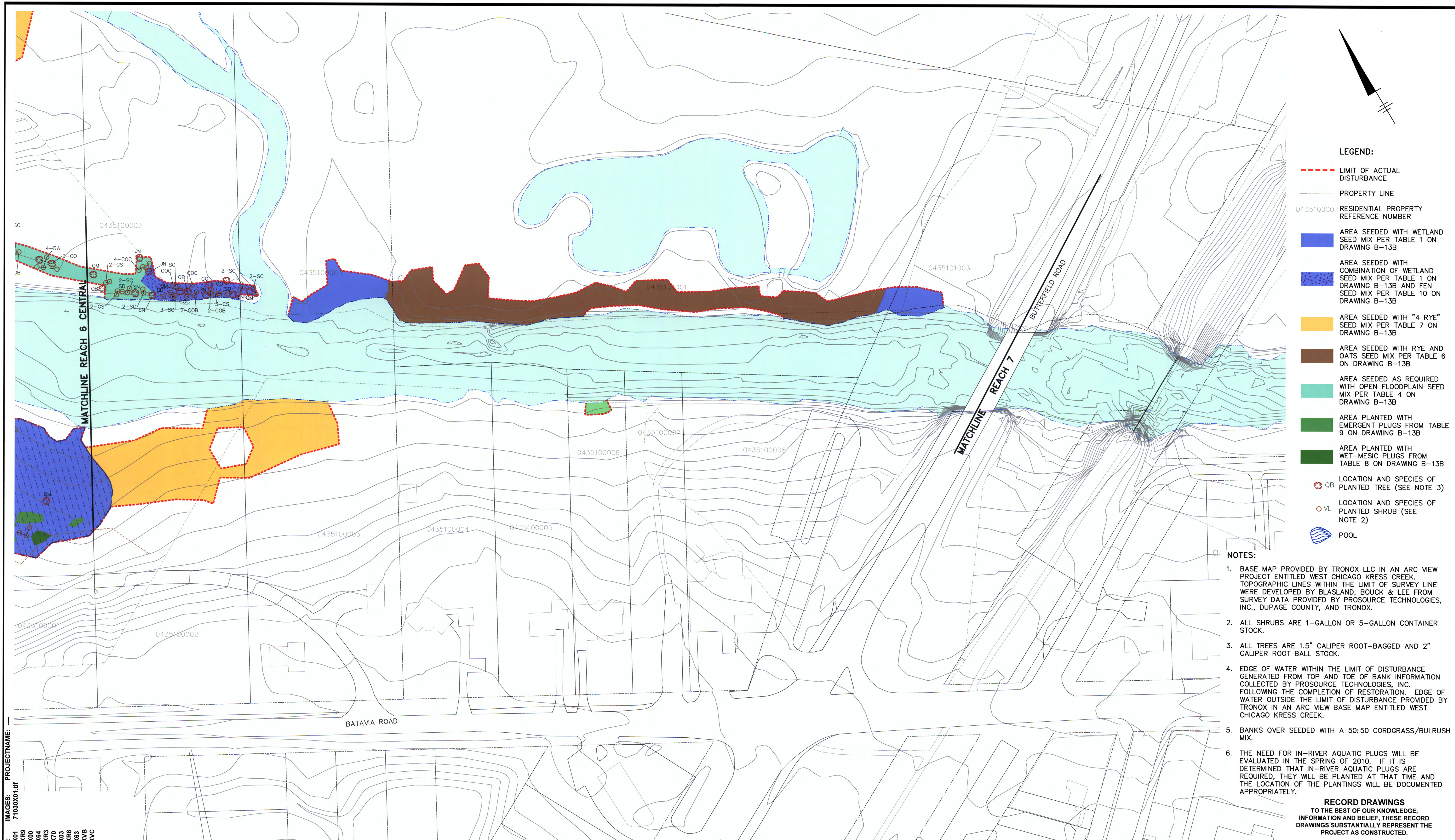
VEGETATION RESTORATION PLAN - REACH 5E SOUTH, REACH 6 NORTH

B0071030.0000.00036

Date
AUGUST 2005

ARCADIS
6723 Towpath Road
PO BOX 66
Syracuse, NY 13214-0066

B-12C



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>ORIGINAL SCALE APPLIES TO 22"x34" DRAWING</p> <p>60' 0 60' 120'</p> <p>1"=60'</p> <p>THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.</p> <p>USE TO VERIFY FIGURE REPRODUCTION SCALE</p> | | | | | | | | | | <p>Professional Engineer's Name MARK OWEN GRAVELDING</p> <p>Professional Engineer's No. 062059378</p> <p>State of ILLINOIS Date Signed 9-30-09</p> <p>Project Mgr. MOG Designed by ANE Drawn by NES</p> | | | | | | | | | | <p>(RECORD DRAWING: MADE FROM DRAWING NO. B-12E, TRACER NO. 71004060/REACH5E-6/71004G10.DWG, DATED 10/22/07)</p> <p>DATE 9-30-09 BY MOG</p> | | | | | | | | | |
| <p>9/30/09 LEGEND REVISIONS</p> <p>8/18/09 RECORD DRAWING</p> <p>No. Date Revisions</p> | | | | | | | | | | <p>Professional Engineer's Name MARK OWEN GRAVELDING</p> <p>Professional Engineer's No. 062059378</p> <p>State of ILLINOIS Date Signed 9-30-09</p> <p>Project Mgr. MOG Designed by ANE Drawn by NES</p> | | | | | | | | | | <p>TRONOX LLC • KRESS CREEK / WEST BRANCH DuPAGE RIVER SITE</p> <p>RECORD DRAWING – REACHES 5E AND 6</p> <p>VEGETATION RESTORATION PLAN - REACH 6 SOUTH</p> | | | | | | | | | |
| <p>THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.</p> | | | | | | | | | | <p>MOG</p> | | | | | | | | | | <p>B0071030.0000.00036</p> <p>Date AUGUST 2009</p> <p>ARCADIS 6723 Township Road PO BOX 66 Syracuse, NY 13214-0066</p> <p>B-12E</p> | | | | | | | | | |

CITY: SYRACUSE DIV/GROUP: 141 DBN: SMITHGALL LDN: SMITHGALL PIC: S.COX PM: H. VANDEWALKER TM: E. RAZAMWCH LYRON: OFF+REF+ GLENYCDIST/TRACTUSE/TRACT1B071030000000002020DWG103019.dwg LAYOUT: B-13B SAVED: 9/30/2009 3:12 PM ACADVER: 7.05 (LMS TECH) PAGES: 7-1030X00 PROJECTNAME: ... XREFS: 7-1030X00

TABLE 1

| Wetland Seed Mix | | |
|------------------|---------------------------------|--------------------------|
| Lbs/Acre | Scientific Name | Common Name |
| 0.063 | <i>Actinomeris alternifolia</i> | Wingstem |
| 0.375 | <i>Alisma subcordatum</i> | Common Water Plantain |
| 0.063 | <i>Alisma triviale</i> | Northern Water Plantain |
| 0.031 | <i>Anemone canadensis</i> | Meadow Anemone |
| 0.25 | <i>Asclepias incarnata</i> | Swamp Milkweed |
| 0.375 | <i>Aster nova-angliae</i> | New England Aster |
| 0.031 | <i>Aster simplex</i> | Panicked Aster |
| 0.75 | <i>Bidens cernua</i> | Nodding Bur Marigold |
| 0.063 | <i>Boehmeria cylindrica</i> | False Nettle |
| 0.5 | <i>Calamagrostis canadensis</i> | Blue Joint Grass |
| 0.188 | <i>Carex cristatella</i> | Crested Sedge |
| 0.063 | <i>Carex pellita</i> | Broad Leaved Wooly Sedge |
| 0.25 | <i>Carex scoparia</i> | Pointed Broom Sedge |
| 0.5 | <i>Carex stipata</i> | Awl-fruited Sedge |
| 0.063 | <i>Carex stricta</i> | Strict Sedge |
| 0.25 | <i>Carex tribuloides</i> | Awl-fruited Sedge |
| 1 | <i>Carex vulpinoidea</i> | Fox Sedge |
| 1 | <i>Cyperus esculentus</i> | Field Nut Sedge |
| 0.063 | <i>Eleocharis erythropoda</i> | Red-rooted Spike Rush |
| 0.015 | <i>Erigeron philadelphicus</i> | Marsh Fleabane |
| 0.125 | <i>Eupatorium maculatum</i> | Spotted Joe Pye Weed |
| 0.125 | <i>Eupatorium perfoliatum</i> | Thoroughwort |
| 0.188 | <i>Gentiana andrewsii</i> | Bottle Gentian |
| 0.125 | <i>Glyceria striata</i> | Fowl Manna Grass |
| 0.125 | <i>Helenium autumnale</i> | Sneezewood |
| 0.188 | <i>Iris virginica shrevei</i> | Blue Flag |
| 0.25 | <i>Juncus torreyi</i> | Torrey's Rush |
| 0.5 | <i>Leersia oryzoides</i> | Rice Cut Grass |
| 0.031 | <i>Lobelia siphilitica</i> | Blue Lobelia |
| 0.188 | <i>Lycopus americanus</i> | Common Water Horehound |
| 0.015 | <i>Lycopus virginicus</i> | Bugleweed |
| 0.015 | <i>Lysimachia thyrsoifolia</i> | Tufted Loosestrife |
| 0.015 | <i>Lythrum alatum</i> | Winged Loosestrife |
| 0.015 | <i>Mentha arvensis</i> | Wild Mint |
| 0.015 | <i>Mimulus ringens</i> | Monkey Flower |
| 0.063 | <i>Penthorum sedoides</i> | Ditch Stonecrop |
| 0.125 | <i>Pontederia cordata</i> | Pickereel Weed |
| 0.125 | <i>Pycnanthemum virginianum</i> | Common Mt Mint |
| 0.015 | <i>Rudbeckia laciniata</i> | Coneflower from Hell |
| 0.25 | <i>Sagittaria latifolia</i> | Duck Potato |
| 0.25 | <i>Scirpus acutus</i> | Hard Stem Bulrush |
| 1 | <i>Scirpus atrovirens</i> | Dark Green Rush |
| 0.125 | <i>Scirpus fluviatilis</i> | River Bulrush |
| 0.25 | <i>Scirpus validus</i> | Great Bulrush |
| 0.015 | <i>Scutellaria lateriflora</i> | Mad Dog Skullcap |
| 0.063 | <i>Solidago gigantea</i> | Late Goldenrod |
| 0.125 | <i>Sparganium eurycarpum</i> | Common Bur-reed |
| 0.063 | <i>Teucium canadense</i> | Germander |
| 1 | <i>Verbena hastata</i> | Blue Vervain |
| 0.188 | <i>Vernonia fasciculata</i> | Common Ironweek |

TABLE 6

| Rye and Oats Seed Mix | | |
|-----------------------|-------------|--|
| Lbs/Acre | Species | |
| 100 | Spring Oats | |
| 50 | Annual Rye | |

TABLE 2

| Upland Savanna Seed Mix | | |
|---|----------------------------------|-------------------------------|
| Lbs/Acre | Scientific Name | Common Name |
| 0.02 | <i>Allium canadense</i> | Wild Onion |
| 0.04 | <i>Anemonella thalictroides</i> | Rue Anemone |
| 0.06 | <i>Arisaema atrorubens</i> | Jack-in-the-Pulpit |
| 0.04 | <i>Aster lateriflorus</i> | Calico Aster |
| 0.06 | <i>Campanula americana</i> | Tall Bellflower |
| 0.15 | <i>Carex blanda</i> | Common Wood Sedge |
| 0.15 | <i>Carex grisea</i> | Wood Gray Sedge |
| 0.15 | <i>Carex normalis</i> | Spreading Oval Sedge |
| 0.15 | <i>Carex rosea</i> | Styles Wood Sedge |
| 0.15 | <i>Carex sparganoides</i> | Loose-headed Bracted Sedge |
| 0.15 | <i>Carex sprengei</i> | Long-beaked Sedge |
| 0.15 | <i>Carex tenera</i> | Narrow-leaved Oval Sedge |
| 0.04 | <i>Cinna arundinacea</i> | Wood Reed |
| 0.15 | <i>Dioscorea villosa</i> | Wild Yam |
| 0.5 | <i>Dodecatheon meadia</i> | Shooting Star |
| 2 | <i>Elymus riparius</i> | Riverbank Rye |
| 2 | <i>Elymus villosus</i> | Silky Wild Rye |
| 2 | <i>Elymus virginicus</i> | Virginial Wild Rye |
| 0.04 | <i>Eupatorium purpureum</i> | Joe Pye Weed |
| 0.03 | <i>Geranium maculatum</i> | Wild Geranium |
| 0.03 | <i>Glyceria striata</i> | Fowl Manna Grass |
| 0.02 | <i>Helianthus strumosus</i> | Pale-leaved Sunflower |
| 0.02 | <i>Hydrophyllum virginianum</i> | Virginia Waterleaf |
| 0.15 | <i>Hystrix patula</i> | Bottlebrush Grass |
| 0.15 | <i>Lilium michiganese</i> | Michigan Lily |
| 0.02 | <i>Osmorhiza claytoni</i> | Sweet Jarvil |
| 0.02 | <i>Phryma leptostachya</i> | Lopseed |
| 0.02 | <i>Polemonium reptans</i> | Jacob's Ladder |
| 0.02 | <i>Polygonatum canaliculatum</i> | Smooth Solomon's Seal |
| 0.2 | <i>Polygonum virginianum</i> | Jumpseed |
| 0.25 | <i>Rudbeckia triloba</i> | Brown Eyed Susan |
| 0.2 | <i>Smilacina racemosa</i> | Feathery False Solomon's Seal |
| 0.02 | <i>Solidago ulmifolia</i> | Elm-leaved Goldenrod |
| 0.04 | <i>Sphenopholis intermedia</i> | Slender Wedge Grass |
| 0.06 | <i>Vernonia altissima</i> | Tall Ironweed |
| Cover Crop: Italian Rye @ 12 lbs per acre | | |

TABLE 7

| 4-Rye Seed Mix | | |
|----------------|----------------------------|-------------------|
| Lbs/Acre | Scientific Name | Common Name |
| 5 | <i>Elymus canadensis</i> | Canada Wild Rye |
| 2 | <i>Elymus riparius</i> | Riverbank Rye |
| 2 | <i>Elymus trachycaulus</i> | Slender Wild Rye |
| 7 | <i>Elymus virginicus</i> | Virginia Wild Rye |

TABLE 8

| Wet Mesic Plant Plugs | | |
|---------------------------------|----------------------|---------------|
| Scientific Name | Common Name | Total Planted |
| <i>Eupatorium maculatum</i> | Spotted Joe Pye Weed | 309 |
| <i>Gentiana andrewsii</i> | Bottle Gentian | 309 |
| <i>Helenium autumnale</i> | Sneezeweed | 618 |
| <i>Lobelia siphilitica</i> | Blue Lobelia | 309 |
| <i>Pycnanthemum virginianum</i> | Common Mountain Mint | 310 |
| Total | | 1855 |

TABLE 3

| Shady Floodplain Seed Mix | | |
|---------------------------|----------------------------------|-----------------------|
| Lbs/Acre | Scientific Name | Common Name |
| 0.62 | <i>Actinomeris alternifolia</i> | Wingstem |
| 0.62 | <i>Aquilegia canadensis</i> | Columbine |
| 0.62 | <i>Aster lateriflorus</i> | Calico Aster |
| 0.15 | <i>Aster shortii</i> | Short's Aster |
| 0.125 | <i>Boehmeria cylindrica</i> | False Nettle |
| 0.25 | <i>Bromus latiglumis</i> | Ear-Leafed Brome |
| 0.06 | <i>Campanula americana</i> | Tall Bellflower |
| 0.062 | <i>Carex blanda</i> | Common Wood Sedge |
| 0.5 | <i>Cinna arundinacea</i> | Wood Reed |
| 0.031 | <i>Diarrhena americana</i> | Beak Grass |
| 1 | <i>Elymus riparius</i> | Riverbank Rye |
| 0.768 | <i>Elymus villosus</i> | Silky Wild Rye |
| 2 | <i>Elymus virginicus</i> | Virginia Wild Rye |
| 0.15 | <i>Eupatorium rugosum</i> | White Snake Root |
| 0.15 | <i>Festuca obtusa</i> | Nodding Fescue |
| 0.5 | <i>Glyceria striata</i> | Flow Manna Grass |
| 0.25 | <i>Impatiens capensis</i> | Orange Jewelweed |
| 0.25 | <i>Leersia oryzoides</i> | Rice Cut Grass |
| 0.15 | <i>Penstemon digitalis</i> | Foxglove Beardtongue |
| 0.15 | <i>Phlox divaricata</i> | Wild Sweet Williams |
| 0.15 | <i>Polygonatum canaliculatum</i> | Smooth Solomon's Seal |
| 0.15 | <i>Pycnanthemum virginianum</i> | Common Mt Mint |
| 0.44 | <i>Rudbeckia laciniata</i> | Green Coneflower |
| 0.031 | <i>Solidago flexicaulis</i> | Zigzag Goldenrod |
| 0.031 | <i>Solidago gigantea</i> | Late Goldenrod |
| 0.125 | <i>Solidago ulmifolia</i> | Elm-leaf Goldenrod |
| 0.31 | <i>Veronicastrum virginicum</i> | Culver's Physic |
| 0.062 | <i>Zizia aurea</i> | Golden Alexander |

TABLE 4

| Open Floodplain Seed Mix | | |
|----------------------------------|------------------------|--|
| Scientific Name | Common Name | |
| <i>Andropogon gerardii</i> | Big Bluestem | |
| <i>Andropogon scoparius</i> | Little Bluestem | |
| <i>Aster novae-angliae</i> | New England Aster | |
| <i>Bidens cernua</i> | Nodding Bur Marigold | |
| <i>Calamagrostis canadensis</i> | Blue Joint Grass | |
| <i>Carex vulpinoidea</i> | Fox Sedge | |
| <i>Echinacea pallida</i> | Pale Purple Coneflower | |
| <i>Elymus canadensis</i> | Canada Wild Rye | |
| <i>Eupatorium maculatum</i> | Spotted Joe Pye Weed | |
| <i>Eupatorium perfoliatum</i> | Thoroughwort | |
| <i>Glyceria striata</i> | Fowl Manna Grass | |
| <i>Panicum virgatum</i> | Prairie Switch Grass | |
| <i>Pycnanthemum virginianum</i> | Common Mt Mint | |
| <i>Rudbeckia hirta</i> | Black Eyed Susan | |
| <i>Silphium laciniatum</i> | Compass Plant | |
| <i>Silphium terebinthinaceum</i> | Prairie Dock | |
| <i>Solidago rigida</i> | Stiff Goldenrod | |

TABLE 5

| Lawn Seed Mix | |
|---------------|---------------------|
| Amount | Species |
| 49.62% | Kentucky Bluegrass |
| 24.83% | Perennial Ryegrass |
| 24.68% | Creeping Red Fescue |

TABLE 10

| Fen Seed Mix | |
|---------------------------------|---------------------------|
| Scientific Name | Common Name |
| <i>Acorus americanus</i> | Sweet Flag |
| <i>Angelica atropurpurea</i> | Angelica |
| <i>Asclepias incarnata</i> | Swamp Milkweed |
| <i>Aster novae-angliae</i> | New England Aster |
| <i>Aster puniceus</i> | Swamp Aster |
| <i>Aster puniceus firmus</i> | Shining Aster |
| <i>Calamagrostis canadensis</i> | Blue Joint Grass |
| <i>Caltha palustris</i> | Marsh Marigold |
| <i>Carex bebbii</i> | Bebb's Sedge |
| <i>Carex hystericina</i> | Procupine Sedge |
| <i>Carex pellita</i> | Broad Leaved Woolly Sedge |
| <i>Carex stipara</i> | Awl-fruited Sedge |
| <i>Carex stricta</i> | Strict Sedge |
| <i>Chelone glabra</i> | Turtlehead |
| <i>Eupatorium maculatum</i> | Spotted Joe Pye Weed |
| <i>Eupatorium perfoliatum</i> | Thoroughwort |
| <i>Iris virginica shrevei</i> | Blue Flag |
| <i>Juncus dudleyi</i> | Dudley's Rush |
| <i>Liatris spicata</i> | Spike Blazingstar |
| <i>Lobelia siphilitica</i> | Blue Lobelia |
| <i>Lycopus americanus</i> | Common Water Horehound |
| <i>Onoclea sensibilis</i> | Sensitive Fern |
| <i>Pedicularis lanceolata</i> | Swamp Betony |
| <i>Rumex orbiculatus</i> | Great Water Dock |
| <i>Pycnanthemum virginianum</i> | Common Mt Mint |
| <i>Scirpus acutus</i> | Hard Stem Bulrush |
| <i>Scutellaria epilobifolia</i> | Marsh Skullcap |
| <i>Silphium perfoliatum</i> | Cup Plant |
| <i>Solidago gigantea</i> | Late Goldenrod |

TABLE 9

| Emergent Plant Plugs | | |
|-------------------------------|-----------------------|---------------|
| Scientific Name | Common Name | Total Planted |
| <i>Acorus calamus</i> | Sweet Flag | 327 |
| <i>Alisma subcordatum</i> | Common Water Plantain | 327 |
| <i>Carex scoparia</i> | Pointed Broom Sedge | 327 |
| <i>Carex vulpinoidea</i> | Fox Sedge | 327 |
| <i>Iris virginica shrevei</i> | Blue Flag | 327 |
| <i>Pontederia cordata</i> | Pickereel Weed | 327 |
| <i>Sagittaria latifolia</i> | Common Arrowhead | 327 |
| <i>Scirpus atrovirens</i> | Dark Green Rush | 328 |
| <i>Scirpus validus</i> | Great Bulrush | 328 |
| Total | | 2945 |

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MARK OWEN GRAVELDING
Professional Engineer's No.
062059378

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Date Signed
9-30-09
Project Mgr.
MOG
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ANE
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